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Christophe Gorecki
Anand Krishna Asundi
Wolfgang Osten
Editors

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Introduction

Survival in the highly competitive process industries is largely dependent on the optimisation of product performance, component quality control, and the production of high-quality economic parts. With increased competition in the present economic climate, investigations into new advanced techniques to improve product quality and cost reduction are essential. In addition, over the recent years, micro-components as part of micro-manufacturing processes are becoming increasingly relevant. Such micro components/systems are key in improving the capabilities and performances of next generation products. However, compared to manufacturing processes at the micro- and nano-meter level, the ability to control, measure and characterise such dimensional features in 3D needs to be further developed. Optical micro- and nano-metrology are key technologies that need proper consideration to address the issue. Associated research focuses on the design, development and evaluation at nanometer scales of both specific procedures and instrumentation to leverage research aspects as well as improve the mass production of micro-and nano-manufacturing products.

This volume contains the proceeding of the sixth conference on Optical Micro- and Nanometrology, Photonics Europe, dedicated to optical inspection methods and developments in nano- and micro-measurements. (The volume is titled, "Optical Micro- and Nonometrology V" due to an earlier title change.) The conference contains 8 oral sessions and one poster session on Micro- and nanometrology, including Profilometry and Surface Measurement, Scatterometry, Nanoscale Metrology, Traceability and Sensitivity Enhancement, Optical Microscopy and Tomography, Phase Reconstruction, Optical Surface and Volume Metrology and New Interferometric Techniques sessions.

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Christophe Gorecki
Wolfgang Osten
Anand Krishna Asundi